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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/332,756	06/14/1999	TENG SOON WEE	16864-0013	3298

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EXAMINER
JOHNSON, JONATHAN J

ART UNIT	PAPER NUMBER
1725	

DATE MAILED: 03/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/332,756	WEE ET AL.	
	Examiner	Art Unit	
	Jonathan Johnson	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2000* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-51* is/are pending in the application.

4a) Of the above claim(s) *14-45* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13 and 46-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-51* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-2, 5, 9-13, 46-48, and 50-51 are rejected under 35 U.S.C. 102(e) as being anticipated by Kobsa (6,163,010). With respect to Claims 1, 46-47 and 50-51, Kobsa teaches a laser apparatus comprising a laser generator for generating an unconditioned output laser beam (Figure 2, Item 52); a beam conditioner responsive to the output laser beam , the beam conditioner including a beam expander responsive to the output laser beam (Figure 2, item 70); a laser beam expander (Figure 3, Item 72); and a beam collimator for collimating the beam (Column 2, Lines 50-65) and a variable beam attenuator responsive to the expanded laser beam (Figure 2, item 60); a beam steerer in the path of the beam for directing the marking beam to a surface of the workpiece without removing carbon or metal (Column 2, Lines 40-45 and Figure 2, Item 38); and a materials handler for positioning the workpiece in the path of the marking beam (Figure 2, Items 34 and 36); a beam sampler in the path of the conditioned marking beam (Figure 2, Items 102 and 80).

With respect to Claim 2, the teachings of Kobsa are the same as relied upon in the rejection of Claim 1. Kobsa teaches a variable beam attenuator includes a first optical plate responsive to the expanded laser beam and operative to generate a conditioned laser beam (Figure 2, Item 60); and a beam splitter responsive to the conditioned laser beam and a operative to split the conditioned laser beam into a plurality of beams including the marking beam (Figure 2, Item 80).

With respect to Claim 5, the teachings of Kobsa are the same as relied upon in the rejection of Claim 1. Kobsa teaches a beam sampler and detector, the beam sampler being positioned in the path of the marking beam (Figure 2, Item 80) and capable of passing a sample of the marking beam to the detector, the detector capable of receiving the sample and generating a signal responsive to the fluence of the marking beam (Figure 2, Item 102).

With respect to Claim 9, the teachings of Kobsa are the same as relied upon in the rejection of Claim 1. Kobsa teaches a processor capable of receiving one or more signals such as the pattern of marks to be placed on the workpiece (Column 6, Lines 1-35).

With respect to Claim 10, the teachings of Kobsa are the same as relied upon in the rejection of Claim 1. Kobsa teaches a laser generator (Figure 2, Item 52). It is the examiner's position that how the laser is being operated is a method limitation that holds little patentable weight in an apparatus claim.

With respect to Claim 11, the teachings of Kobsa are the same as relied upon in the rejection of Claim 1. Kobsa teaches a beam is scanned across a portion of the surface in a pattern (Column 8, Example 2).

With respect to Claim 12, the teachings of Kobsa are the same as relied upon in the rejection of Claim 1. Kobsa teaches a movable beam conditioner (Figure 2, item 70, 60, and 38).

With respect to Claim 13, the teachings of Kobsa are the same as relied upon in the rejection of Claim 1. Kobsa teaches the laser beam is in pulses (Column 4, Lines 30-37) as well as a movable base (Figure 2, Items x and y). It is the examiner's position that one can change the laser beam scanning speed by moving the base.

With respect to Claim 48, the teachings of Kobsa are the same as relied upon in the rejection of Claim 1. Kobsa teaches an apparatus having a control means coupled to the beam steerer (Column 6, Lines 25-55).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Kobsa (6,163,010) as applied to claim 2 above, and further in view of Johnson et al. (5,057,664).

Johnson et al. teaches the first optical plate is rotatable along an axis parallel to the laser beam and operative to vary the fluence of the marking beam (Figure 2, Item 12a). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the laser of Kobsa to utilize a the wave plate in order to minimize the striation formations (see Johnson et al. Column 3, Lines 40-45).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Kobsa (6,163,010) and Johnson et al. (5,057,664) as applied to claim 2 above, and further in view of Stovell et al. (4,335,939). Stovell et al. teaches the first optical plate is a half wave plate (Column 5, Lines 15-20). It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the combined invention of Kobsa and Johnson et al. to utilize a half wave plate in order to control the pattern orientation with respect to the optical axis of the material (see Stovell et al. Column 5, Lines 10-20).

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Kobsa (6,163,010) as applied to claim 1 above, and further in view of Maruyama (4,547,651). Kobsa teaches a variable beam attenuator includes a beam splitter (Figure 2, Item 80). Maruyama teaches an apparatus comprises an optical isolator for optically isolating the laser generator from a reflection of the marking beam to the laser generator (Column 2, Lines 1-4) and the optical isolator including a second optical plate positioned in the path of the beam (Column 2, Lines 50).

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the laser of Kobsa to utilize a second wave plate in order to render a smooth cut surface (see Maruyama Column 1, Lines 36-40).

With respect to Claim 7, the teachings of Kobsa and Maruyama are the same as relied upon in the rejection of Claim 6. Maruyama teaches the second optical plate is a quarter wave plate (Column 2, Lines 5-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the laser of Kobsa to utilize a quarter wave plate in order to render a smooth cut surface (see Maruyama Column 1, Lines 36-40).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Kobsa (6,163,010) as applied to claim 1 above, and further in view of Johnson et al. (5,057,664). Johnson et al. teaches the laser generator includes a q switched diode pumped laser (Figure 1, Item 18). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the laser of Kobsa to utilize a smaller and more reliable pulsed emission (see Johnson et al. Column 1, Lines 35-45).

Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Kobsa (6,163,010) as applied to claim 48 above, and further in view of Bellar (4,636,043). Bellar teaches where the control means is coupled to the beam expander (figure 1, item 36). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the

laser of Kobsa to utilize a control means coupled to the beam expander in order to provide a compact arrangement of the components (see Bellar Column 1, Lines 30-50).

Response to Arguments

Applicant argues that the Kobasa reference is "not capable of marking a surface of a multi-layered workpiece and only teaches cutting thin sheets!". (Applicant's arguments Page 5, Lines 16-21). The examiner would like to point out that applicant has not submitted any relevant art or affidavit explaining how Kobasa is "not capable of marking a surface." Merely stating that the apparatus of Kobasa is "not capable of marking a surface" does not necessarily make it so. It is the examiner's position that even though Kobasa teaches cutting thin sheets, the apparatus of Kobasa can be used to mark a very thick workpiece.

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Applicant has not claimed the invention in such as way as to result in a manipulative difference as compared to the prior art. The rejection is maintained despite applicant's traversal.

Applicant argues that Kobasa does not teach a material handler. It is the examiner's position that the "material handler" can reasonably be read to include an X-Y table of Kobasa as the X-Y table moves or handles the workpiece in relation to the laser beam. Further, applicant's

own specification teaches that a material handler can be an X-Y stage (See applicant's arguments Page 5, Lines 10-17). The rejection is maintained despite applicant's traversal.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Johnson whose telephone number is 703-308-0667. The examiner can normally be reached on M-Th 7AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 703-308-3318. The fax phone numbers for the organization where this

application or proceeding is assigned are 703-305-7718 for regular communications and 703-305-5885 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

jj
February 19, 2002

M. ALEXANDRA ELVE
PRIMARY EXAMINER